

The listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-9 (cancelled)

Claim 10 (currently amended) A semiconductor device comprising:

a silicon substrate forming one of a collector and an emitter, the substrate being of a first conductivity type;

a layer of SiGe of a second conductivity type covering at least a portion of the silicon substrate;

a first layer of silicon of the second conductivity type at least substantially supported by and covering a substantial portion of the SiGe layer;

a first layer of polysilicon of the second conductivity type at least substantially supported by and covering a substantial portion of the first layer of silicon with the exception of a window region, the first layer of silicon entirely exposed within the window region and having its surface unaffected by a process of etching within the window region, the first layer of silicon forming a base terminal of the transistor; and,

a second layer of polysilicon of the first conductivity type insulated from the first layer of polysilicon and contacting the entirely exposed and unetched first layer of silicon within the window region, said second layer of polysilicon forming the other of the collector and the emitter terminals of the transistor.

Claim 11 (previously presented) A semiconductor device as defined in claim 10 wherein the silicon substrate comprises n-type material and forms the collector.

Claim 12 (previously presented) A semiconductor device as defined in claim 11 wherein the layer of SiGe comprises p-type material, and wherein the second layer of polysilicon comprises n-type material and forms the emitter.

Claim 13 (currently amended) A semiconductor device comprising:
a silicon layer of a first conductivity type;
a layer of SiGe of a second conductivity type covering at least a region of the silicon layer; and,
a first layer of silicon of the second conductivity type at least substantially supported by and covering a substantial portion of the silicon and SiGe layer;
a first layer of polysilicon of the second conductivity type at least substantially supported by and covering a substantial portion of the first layer of silicon with the exception of a small window region, within which the first layer of silicon is entirely exposed; and,
a second layer of polysilicon of the first conductivity type covering the small window region and entirely contacting the first layer of silicon within this small window region, where the first layer of silicon within the small window region has a surface unaffected by a process of etching.

Claim 14 (original) A semiconductor device as defined in claim 13, wherein the silicon layer serves as a substrate and is substantially thicker than the layer of SiGe.

Claim 15 (original) A semiconductor device as defined in claim 13 wherein the SiGe layer has a substantially uniform thickness.

Claim 16 (previously presented) A semiconductor device as defined in claim 13 wherein the thickness of the SiGe layer covered by the first layer of silicon is of a substantially same thickness and impurity concentration as the remaining portion of the layer of SiGe covering at least a region of the silicon layer.

Claims 17-21 (cancelled)

Claim 22 (previously presented) A semiconductor device according to claim 10, comprising an insulating material disposed between the two layers of polysilicon.

Claim 23 (previously presented) A semiconductor device according to claim 22, wherein the disposed insulating material is formed by reacting the first layer of polysilicon with a substance to form an insulating cover thereon.

Claim 24 (previously presented) A semiconductor device according to claim 22, wherein the disposed insulating material is formed by depositing an insulating material thereon.

Claim 25 (previously presented) A semiconductor device as defined in claim 10, wherein the first layer of silicon and the SiGe layer have a substantially uniform thickness.

Claim 26 (previously presented) A semiconductor device as defined in claim 10, wherein the thickness of the SiGe layer covered by the second layer of polysilicon is of a substantially a same thickness and impurity concentration as the remaining portion of the layer of SiGe covering at least a region of the silicon layer.

Claim 27 (previously presented) A semiconductor device according to claim 13, comprising an insulating material disposed between the two layers of polysilicon

Claim 28 (previously presented) A semiconductor device according to claim 27, wherein the disposed insulating material is formed by reacting the first layer of polysilicon with a substance to form an insulating film thereon.

Claim 29 (previously presented) A semiconductor device according to claim 27, wherein the disposed insulating material is formed by depositing an insulating material thereon.

Claim 30 (currently amended) A semiconductor device comprising:
a silicon substrate forming one of a collector and an emitter, the substrate being of a first conductivity type;

a layer of SiGe of a second conductivity type covering at least a portion of the silicon substrate;

a first layer of silicon of the second conductivity type at least substantially supported by and covering a substantial portion of the SiGe layer;

a first layer of polysilicon of the second conductivity type at least substantially supported by and covering a substantial portion of the first layer of silicon with the exception of a window region, the first layer of silicon entirely exposed within the window region and having its surface unaffected by a process of etching within the window region, the first layer of silicon forming a base terminal of the transistor; and,

a second layer of polysilicon of the first conductivity type insulated from the first layer of polysilicon and contacting the unetched first layer of silicon within the window region in its entirety, said second layer of polysilicon forming the other of the collector and the emitter terminals of the transistor, wherein the first silicon layer has a uniform thickness profile in a direction transverse the layers within the semiconductor substrate within predetermined limits within a region of the semiconductor substrate including at least a transistor, the uniform thickness profile for providing substantially reproducible results for the thickness of the first silicon layer.

Claim 31 (previously presented) A semiconductor device as defined in claim 30, wherein the uniform thickness profile provides substantially reproducible electrical characteristics of the first silicon layer and the SiGe layer.

Claim 32 (previously presented) A semiconductor device as defined in claim 31, wherein the uniform thickness profile of the SiGe layer is other than a uniformly thick layer.